UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,399	10/01/2003	Myoung-Ho Kim	1572.1172	5161

21171 7590 04/25/2008

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
CUNNINGHAM, GREGORY F	
ART UNIT	PAPER NUMBER
2624	
MAIL DATE	DELIVERY MODE
04/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/674,399	KIM, MYOUNG-HO	
	Examiner	Art Unit	
	GREGORY F. CUNNINGHAM	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-8,12 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12 and 13* is/are allowed.

6)☒ Claim(s) *2-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications of amendment received 1/25/2008.

2. The disposition of the claims is as follows: claims 2-8, 12 and 13 are pending in the application. Claims 2 - 5, 7, 8, 12 and 13 are independent claims. Claims 1 and 9 - 11 have been cancelled.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The element "hooking the picture signal transmitted to an operating system of the computer" renders the claim indefinite.

B. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

The specification places the term "hooking" in the context of making a connection. For example: "**hooking** a signal input by the user" and "The display adjusting key monitoring part 28 **hooks** the input'signal through such input units as the mouse 12, the keyboard 10 or the display

adjusting key 11, etc., while the operating system 22 is executing, and determines, for example, whether the input signal is input from the display adjusting key 11."

However, "hooking the picture signal transmitted to an operating system of the computer" as amended in claim 4 lacks any context of a connection as inspired by the specification. The **picture signal** transmitted to an operating system of the computer is hooked to what or where?

C. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships pertain to:

"Reviewing a selection of a picture change automatic execution to allow a displaying status of the picture signal to be automatically changed by the video controller based on whether the moving picture is determined to be output to and displayed on the displaying apparatus."

How does the act of "reviewing" render control? Who or what is doing the "selection"? Who or what is "automating"? Who or what is doing the "determining"? Is the "status of the picture signal" simply the displayed output? The "displaying status" is assumed to be what is only being changed. What is meant by "picture change automatic execution" in context with the rest of the claim element?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 4-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boger (US 6,724,351 B1), further in view of Czako (US 6,313,850 B1), and further in view of PCXBV-Yx Multi-Mode Color Monitor, Installation Guide, hereinafter Multi-Mode.

A. Boger discloses claim 2, "A method of controlling a video control system in a computer having a video controller [col. 2, lns. 49-54] for supplying at least a computer graphics picture signal to a displaying apparatus [col. 2, lns. 12-28], the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the method comprising:

selecting a temporary change of a current display setting within the video controller for the picture signal upon a user selection regarding operation of the computer [col. 2, ln. 64 – col. 3, ln. 4, wherein user selects mode 1 or mode 2; and col. 7, lns. 5-20]

through user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the current display setting is based upon the user activation and non-activation of the display adjusting key [Boger: col. 6, ln. 61 – col. 8, ln. 10, see 'user input', 'special function key, button, or key combination on a keyboard or other input device' and switching from one mode to another and/or back again thus rendering it temporary];

adjusting the picture signal based on the pre-assigned display adjusting value and the selecting of the temporary change [Boger: col. 2, lns. 12-26, col. 5, ln. 54 – col. 6, ln. 16]; and

outputting the adjusted picture signal to the displaying apparatus from the video controller [col. 2, ln. 64 – col. 3, ln. 4; col. 5, ln. 54 – col. 6, ln. 16; and col. 8, lns. 31-43];

wherein a pre-assigning of pre-assigned display adjusting value comprises assigning a value for adjusting any one of a brightness, color, contrast, and gamma of a moving picture signal provided to the displaying apparatus" [as detailed].

However, Boger does not appear to disclose, "outputting the adjusted picture signal to the displaying apparatus from the video controller, wherein a pre-assigning of pre-assigned display adjusting value comprises assigning a value for adjusting any one of a brightness, color, contrast, and gamma of a moving picture signal provided to the displaying apparatus", but Czako does at col. 9, lns. 50-64, 'In operation, four-byte color/contrast values are loaded into locations 326 to correspond to DVD pixel values which correspond to color palette addresses 324. Typically, the color palette 322 is loaded by a display processor through a bus, such as bus 130 in FIG. 1. In this manner, although only four color/contrast values are associated with the subpicture pixel value at a given time, those four values are chosen from 2.sup.24 possible colors and 16 possible contrast values. The bit map 312 and color palette 322 are typically located within a video controller such as video controller 165 of FIG. 1. Should a user scroll to one of the option locations displayed on the screen 300, the highlight object 213 may be used to change the appearance of the display, accenting a button for example, to thereby indicate to a user which of the displayed options he has chosen.' And furthermore in col. 10, ln. 65 – col. 11, ln. 10; col. 12, lns. 10-16; and col. 13, lns. 6-12.

Multi-Mode further discloses "selecting a temporary change of a current display setting within the video controller for the picture signal upon a user selection regarding operation of the computer through user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the current display setting is based upon the user activation and non-activation of the display adjusting key" [on pages 6-10]

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25, and further coupled with Multi-Mode because it would provide for user control of menu settings as revealed by Multi-Mode on page 6.

B. Boger discloses claim 4, "A method of controlling a video control system in a computer having a video controller [col. 2, lns. 49-54] for supplying at least a computer graphics picture signal to a displaying apparatus [col. 2, lns. 12-28] and a video driver controlling the video controller, the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting

of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the method comprising:

hooking the picture signal transmitted to an operating system of the computer [Boger: col. 9, ln. 47 – col. 10, ln. 8, corresponding with 'sets of instructions' and/or 'applets'];

ascertaining whether the picture signal is a moving picture [Boger: col. 2, lns. 28-42, corresponds with 'comprises a screen which is operable to display in a visually detectable manner output from the host computer system when operating in the interlaced mode of operation and which is further operable to display a television compatible signal such as an NTSC signal when operating in the noninterlaced mode of operation.', whereby 'visually detectable manner' corresponds to "ascertaining" and 'NTSC signal when operating in the noninterlaced mode of operation' corresponds to "picture signal is a moving picture"];

automatically selectively supplying the pre-assigned display adjusting value to the video driver if change of a corresponding picture displaying status for the at least one display is determined to have been selected by a user and based on the ascertaining operation indicating the input signal is the moving picture [Boger: col. 2, lns. 12-27 at 'television mode and interlaced mode will refer to an interlaced mode of display operation with any other modifications for optimizing the viewing of a television signal, such as overscanning, increasing brightness, changing the color temperature, and so forth. As used herein, the terms computer graphics mode and noninterlaced mode refer to a progressively scanned computer graphics mode of operation which is typically underscanned and generally is less bright and more sharply focused than the television mode of operation.' and

col. 3, lns. 5-15 at 'The host system is operable to send a command to switch the display between the television and computer graphics modes and the host system further comprises processing circuitry to digitize the analog video material and to display it in an overlay window as a part of the host system's computer graphics mode output.' and

col. 4, lns. 59-62 at 'The display device 114 is a display capable of operating in a television mode and a computer graphics mode, and which is capable of receiving and executing commands received by hardware system 100.' and

col. 7, lns. 21-34 at 'Upon receipt of a user input command to switch the display mode from the standard noninterlaced computer video display mode to the television mode (e.g., NTSC mode) or vice versa, software 302 initiates the mode change. In one embodiment, software 302 controls the video hardware by calling a command, service, or function in the VGA BIOS residing in the system ROM 304. In another embodiment, software 302 controls the video hardware directly rather than via the BIOS interface, as would be understood by those skilled in the art. The mode change command may be sent to the display microprocessor 308 via VGA controller 306, for example, via a bidirectional display data channel (DDC) interface. The microprocessor 308 acts on display circuitry 310 to change the display mode.' and

col. 7, ln. 35 – col. 8, ln. 10 at 'The flow chart of FIG. 4 illustrates a method according to the present invention for employing a host computer system to change the operational mode of a display between a first display mode which is one of a television mode and computer graphics mode (as defined above) and a second display mode, which is the other of a television mode and computer graphics mode. In step 402, the display is in the first display mode. Absent any user input changing the display mode in step 404, the process loops within the first display mode.

Upon receiving user input to change the display mode, the host system sends a command over the DDC interface to put the system in the second display mode in step 406. The command is a DDC compatible command, i.e., a command that does not conflict with or otherwise interfere with any other DDC commands. The process then loops within the second display mode until user input is received in step 408 to change the display mode. In step 410, the system puts the display the first display mode.

In the process of FIG. 4, when the display mode is changed from the computer display mode to the television display mode, the video output from the video controller 202 (FIG. 2) may be stopped, or may continue to be output but not displayed by display 114. Display 114, however, will receive DDC commands from the host system regardless of whether the display is in the computer graphics mode or television mode. When the computer is changed from computer graphics mode to television mode, the display may be returned to the computer graphics mode by a number of methods. For example, in an embodiment, a keyboard or other input device (e.g., a key, function key, key combination, etc.) may be employed to return the display mode from television mode to computer graphics mode. This is advantageous in single monitor systems (i.e., where the display 114 is the only monitor in the system). In one embodiment, a dialog box may appear before the display is switched from computer graphics mode to television mode informing the user of the keystroke or other procedure for returning to the computer graphics mode. In this embodiment, optional "OK" and "Cancel" buttons may be provided, wherein the mode is changed only upon the user selecting "OK" and wherein the mode is not changed upon the user selecting "Cancel."' and

col. 8, ln. 65 – col. 9, ln. 39 at 'The switching between the television mode and the computer graphics mode is controllable through the host computer system as described above. For example, a software interface may be provided to allow a user to transition the display between the computer graphics mode and the television mode using the host computer system. Alternative methods may also be provided for transitioning the display between the television and computer graphics mode, such as a remote control command, manual controls, keyboard input, and so forth, in the same manner as described above.';]

selectively adjusting within the video driver the picture signal to be supplied to the video controller based on and receipt of the supplied pre-assigned display adjusting value [Boger: col. 6, ln. 61 – col. 7, ln. 34 at 'FIG. 3 shows a block diagram of a preferred video display control system according to the present invention. The present invention may be implemented in software 302 which may be tangibly embodied on a medium readable by a computer and capable of causing the computer to execute the method according to the present invention. Software 302 may be implemented as a part of or as an extension of an operating system or software application environment, such as an audiovisual control panel or the like, for example, of the type including controls for selection and playback of A/V sources and other A/V features.

Software 302 allows user input to select the desired operational mode of the display 114. In one embodiment, display mode selection may be made, for example, via a selection of an item in an on-screen menu such as a pull down menu or an otherwise user navigable menu or menu hierarchy. In addition to or as an alternative to an on-screen user interface, a keyboard or other input device (e.g., a pointing device) may be employed to provide user input for display mode selection, such as a special function key, button, or key combination on a keyboard or other input

device. As yet a further additional or alternative input method, the user input may be obtained through a series of interactive prompts, such as a software "wizard" or the like to guide a user through the process of setting the display mode and optionally in making other settings such as channel or A/V source selection and so forth.

Upon receipt of a user input command to switch the display mode from the standard noninterlaced computer video display mode to the television mode (e.g., NTSC mode) or vice versa, software 302 initiates the mode change. In one embodiment, software 302 controls the video hardware by calling a command, service, or function in the VGA BIOS residing in the system ROM 304. In another embodiment, software 302 controls the video hardware directly rather than via the BIOS interface, as would be understood by those skilled in the art. The mode change command may be sent to the display microprocessor 308 via VGA controller 306, for example, via a bidirectional display data channel (DDC) interface. The microprocessor 308 acts on display circuitry 310 to change the display mode.']; and

outputting the adjusted picture signal to the displaying apparatus from the video controller [Boger: col. 2, ln. 64 – col. 3, ln. 4; col. 5, ln. 54 – col. 6, ln. 16; and col. 8, lns. 31-43], wherein the pre-assigned display adjusting value is set at an application level of the computer operating system"

In as much as Boger discloses the above elements, for example, supplying the pre-assigned display adjusting value to the video driver if a change of a corresponding picture displaying status for the at least one display is determined to have been selected by a user and based on the ascertaining operation indicating that the input signal is the moving picture; and selectively adjusting within the video driver the picture signal to be supplied to the video

controller based on and receipt of the supplied pre-assigned display adjusting value' Czako further discloses this in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

While Boger does not specifically state supplying the display adjusting value to the video driver, Boger does disclose that the control information operable to control the display, and circuitry for receiving control information from the personal computer via display cable 214 (e.g., via an operating system extension, standard PC utility, display-specific utility, and so forth). Furthermore, Boger employs a video controller and software application operating as part of an extension of an operating system, it is well known and inherent that the various hardware components of a computer system employ and use software drivers, for example a video controller inherently employs a video software driver. Therefore when control information is supplied to Boger's apparatus for changing the mode of a display apparatus, it must inherently also be asserted through the video driver, since it is well known and inherent that a video driver acts as the interface between a video controller and a video display.

Furthermore (a) value set up in advance; and (b) use of a video driver; the former is obvious since the automatic adjustment of a proper quality of picture and having set data of

contrast and luminance corresponding to the ID code stored therein separately corresponds to "supplying the display adjusting value set up in advance". As to the former "video driver", Boger has disclosed this as obvious as revealed supra for claim 2.

Although Boger does not appear to disclose portion of the above elements, for example, pre-assigned display adjusting value, Czako does in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

C. Boger discloses claim 5, "A system for video control in a computer having a video controller [col. 2, lns. 49-54] for supplying a computer graphics picture signal to a displaying apparatus [col. 2, lns. 12-28], the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the system comprising:

a display adjusting input part allowing assignment of the pre-assigned display adjusting value adjusting a displaying status of the picture signal displayed on the displaying apparatus [Boger: col. 2, lns. 12-27 at 'television mode and interlaced mode will refer to an interlaced mode of display operation with any other modifications for optimizing the viewing of a television signal, such as overscanning, increasing brightness, changing the color temperature, and so forth. As used herein, the terms computer graphics mode and noninterlaced mode refer to a progressively scanned computer graphics mode of operation which is typically underscanned and generally is less bright and more sharply focused than the television mode of operation.' and

col. 3, lns. 5-15 at 'The host system is operable to send a command to switch the display between the television and computer graphics modes and the host system further comprises processing circuitry to digitize the analog video material and to display it in an overlay window as a part of the host system's computer graphics mode output.' and

col. 4, ln. 59 – col. 5, ln. 8; wherein 'standard interlaced television signal' and 'noninterlaced or progressively scanned output' correspond to "display adjusting input part allowing input of a display adjusting value adjusting a displaying status of the picture signal displayed on the displaying apparatus' and

col. 6, lns. 4-16 wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures. The control information may be input by one or more of user-accessible manual controls (e.g., a push-button control panel), a remote control unit (e.g., IR, RF, cabled, and so forth) operable to control the display, and circuitry for receiving control

information from the personal computer via display cable 214 (e.g., via an operating system extension, standard PC utility, display-specific utility, and so forth).' and

col. 7, lns. 21-34 at 'Upon receipt of a user input command to switch the display mode from the standard noninterlaced computer video display mode to the television mode (e.g., NTSC mode) or vice versa, software 302 initiates the mode change. In one embodiment, software 302 controls the video hardware by calling a command, service, or function in the VGA BIOS residing in the system ROM 304. In another embodiment, software 302 controls the video hardware directly rather than via the BIOS interface, as would be understood by those skilled in the art. The mode change command may be sent to the display microprocessor 308 via VGA controller 306, for example, via a bidirectional display data channel (DDC) interface. The microprocessor 308 acts on display circuitry 310 to change the display mode.'];

a picture adjusting value storage to store the pre-assigned display adjusting value [corresponds with col. 5, ln. 54 – col. 6, ln. 16, wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.' Microprocessors and/or microcontrollers inherently employ memory in the form of RAM, ROM, PROM EEPROM, VRAM, SGRAM, (see col. 3, ln. 48 – col. 4, ln. 58 for memory types and connections) and internal registers to store and operate on all digital input/output information data. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use microprocessors and/or microcontrollers disclosed by Boger in conjunction with memory for "storing input display adjusting value".];

a displaying status change part to select a temporary change of the displaying status of the picture signal displayed on the displaying apparatus according to a user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the displaying status is based upon the user activation and non-activation of the display adjusting key [Boger: col. 2, ln. 64 – col. 3, ln. 4, wherein user selects mode 1 or mode 2; col. 6, ln. 61 – col. 8, ln. 10, see 'user input', 'special function key, button, or key combination on a keyboard or other input device' and switching from one mode to another and/or back again thus rendering it temporary; col. 6, lns. 4-8 at 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'; and col. 7, lns. 5-52 at 'In addition to or as an alternative to an on-screen user interface, a keyboard or other input device (e.g., a pointing device) may be employed to provide user input for display mode selection, such as a special function key, button, or key combination on a keyboard or other input device. As yet a further additional or alternative input method, the user input may be obtained through a series of interactive prompts, such as a software "wizard" or the like to guide a user through the process of setting the display mode and optionally in making other settings such as channel or A/V source selection and so forth.']; and

a controller [col. 6, lns. 4-8 at 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'] controlling the video controller [col. 2, lns. 49-67; col. 5, ln. 54 – col. 6, ln. 16; see video controller] and changing the picture signal to be output from the

video controller based on the pre-assigned display adjusting value [Boger: col. 5, ln. 54 – col. 6, ln. 16], in response to the selected displaying status temporary change [col. 2, ln. 55 – col. 3, ln. 4; col. 7, lns. 21-34];

wherein the picture corresponding to the selected displaying status temporary change comprises a moving picture" [as detailed].

In as much as Boger discloses the above elements, for example, pre-assigned display adjusting value, Czako discloses this in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

D. Boger discloses claim 6, "The system according to claim 5, wherein the pre-assigned display adjusting value [Boger: col. 6, lns. 1-16 <see brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.>; and col. 2, lns. 42-48] is for adjusting the moving picture [Boger: interlaced mode; and col. 1, lns. 48-58, wherein brightness and color temperature are preset according to "TV mode" or "computer graphics mode"]; and

the controller changes the picture signal [col. 6, lns. 4-16 wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'] to be output from the video controller [col. 2, lns. 49-54] according to the pre-assigned display adjusting value [corresponds with col. 5, ln. 54 – col. 6, ln. 16, wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.' Microprocessors and/or microcontrollers inherently employ memory in the form of RAM, ROM, PROM EEPROM, VRAM, SGRAM, (see col. 3, ln. 48 – col. 4, ln. 58 for memory types and connections) and internal registers to store and operate on all digital input/output information data. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use microprocessors and/or microcontrollers disclosed by Boger in conjunction with memory for "storing input display adjusting value".] supra for claim 5 and [as detailed].

Although Boger does not appear to disclose portion of the above elements, for example, pre-assigned display adjusting value, Czako does in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll

disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

E. Boger discloses claim 8, "A computer video control system with a video controller for supplying at least a computer graphics picture signal to a display apparatus, the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the computer video control system comprising:

a programmed computer processor storing the pre-assigned display adjusting value input by a user to temporary change a displaying status of the picture signal as a moving picture displayed on the displaying apparatus based upon user activation of a display adjusting key separate from the at least one display [Boger: col. 5, ln. 9 – col. 6, ln. 16 see 'processor', 'user'; and col. 4, ln. 59 – col. 5, ln. 8; wherein 'standard interlaced television signal' and 'noninterlaced or progressively scanned output' correspond to "display adjusting value to convert a displaying status of a moving picture displayed on a monitor"; col. 2, lns. 11-27, wherein television (interlaced) mode optimizes TV signal for overscanning, increased brightness, color temperature, and so forth, while computer graphics (noninterlaced) mode does so for underscanned, generally less bright and more sharply focused than TV mode; col. 6, lns. 4-16 wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor

controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures. The control information may be input by one or more of user-accessible manual controls (e.g., a push-button control panel), a remote control unit (e.g., IR, RF, cabled, and so forth) operable to control the display, and circuitry for receiving control information from the personal computer via display cable 214 (e.g., via an operating system extension, standard PC utility, display-specific utility, and so forth).'], selecting the displaying status [col. 2, ln. 64 – col. 3, ln. 4, wherein user selects mode 1 or mode 2; col. 6, lns. 4-8 at 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'; and col. 7, lns. 5-20; and wherein "displaying status" is interpreted from specification at "when changing the display settings by the OSD, a brightness value, a contrast value, and so on, respectively need to be increased or otherwise decreased to set an adequate displaying status of the picture" such that changing a brightness value, a contrast value, and so on, corresponds with "a displaying status conversion" as exemplified by Boger supra.] according to a job processing [Boger: col. 6, ln. 61 – col. 7, ln. 4, corresponding with 'FIG. 3 shows a block diagram of a preferred video display control system according to the present invention. The present invention may be implemented in software 302 which may be tangibly embodied on a medium readable by a computer and capable of causing the computer to execute the method according to the present invention. Software 302 may be implemented as a part of or as an extension of an operating system or software application environment, such as an audiovisual control panel or the like, for example, of the type including controls for selection and

playback of A/V sources and other A/V features.', wherein 'a software application' corresponds to "job"], and changing a moving picture signal output to the pre-assigned displaying apparatus in response to the displaying status selection and based on the pre-assigned display adjusting value [Boger: col. 5, ln. 54 – col. 6, ln. 16];

wherein the pre-assigned display adjusting value relates to a moving picture mode and the temporary change of the displaying status is based upon the user activation and non-activation of the display adjusting key [Boger: col. 2, lns. 12-27 at 'television mode and interlaced mode will refer to an interlaced mode of display operation with any other modifications for optimizing the viewing of a television signal, such as overscanning, increasing brightness, changing the color temperature, and so forth.]" [as detailed].

In as much as Boger discloses the above elements, for example, pre-assigned display adjusting value, Czako further discloses this in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boger, Czako and further in view of Iwaki (US 6,567,097 B1).

A. Boger and Czako disclose claim 3, "A method of controlling a video control system in a computer having a video controller [Boger: col. 2, lns. 49-54] for supplying at least a computer graphics picture signal to a displaying apparatus [Boger: col. 2, lns. 12-28], the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the method comprising:

selecting a temporary change of a current display setting within the video controller for the picture signal upon a user selection regarding operation of the computer [Boger: col. 2, ln. 64 – col. 3, ln. 4, wherein user selects mode 1 or mode 2; and col. 7, lns. 5-20]

through user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the current display setting is based upon the user activation and non-activation of the display adjusting key [Boger: col. 6, ln. 61 – col. 8, ln. 10, see 'user input', 'special function key, button, or key combination on a keyboard or other input device' and switching from one mode to another and/or back again thus rendering it temporary];

adjusting the picture signal based on the pre-assigned display adjusting value and the selecting of the temporary change [Boger: col. 2, lns. 12-26, col. 5, ln. 54 – col. 6, ln. 16]; and

outputting the adjusted picture signal to the displaying apparatus from the video controller [Boger: col. 2, ln. 64 – col. 3, ln. 4; col. 5, ln. 54 – col. 6, ln. 16; and col. 8, lns. 31-43];

wherein a pre-assigning of pre-assigned display adjusting value comprises assigning a value for adjusting any one of a brightness, color, contrast, and gamma of a moving picture signal provided to the displaying apparatus [Czako: col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10; col. 12, lns. 10-16; and col. 13, lns. 6-12

reviewing a selection of a picture change automatic execution to allow a displaying status of the picture signal to be automatically changed by the video controller based on whether the moving picture is determined to be output to and displayed on the displaying apparatus [Boger: col. 2, lns. 29-42; col. 2, ln. 55 - col. 3, ln. 15; col. 5, ln. 53 – col. 6, ln. 35];

automatically adjusting the signal of the moving picture signal supplied from the video controller to the displaying apparatus according to the pre-assigned display adjusting value if it is determined that the picture change automatic execution has been selected and the moving picture is to be displayed on the displaying apparatus [Boger: col. 5, ln. 53 – col. 6, ln. 35]" supra for claim 2 and [as detailed].

In as much as Boger and Czako disclose, "selecting a picture conversion automatic execution to allow a displaying status of the picture signal to be automatically converted by the video controller if the moving picture is determined to be displayed on the displaying apparatus [Iwaki: col. 10, ln. 54 – col. 11, ln. 15 wherein 'mode switching among different sources can also be automatically done' corresponds to "automatic execution"];

determining whether the moving picture is to be displayed on the displaying apparatus [corresponds with Iwaki: col. 9, 30-35; and col. 11, lns. 4-8, wherein 'the interlaced data bypass circuit 501 or the like checks if interlaced video data is input, and upon detection of interlaced video data, corresponding parameters are set in registers of the graphics controller 105 by hardware'];

automatically adjusting the signal of the moving picture signal supplied from the video controller to the displaying apparatus according to the pre-assigned display adjusting value [corresponds with Iwaki: col. 2, lns. 12-21; and col. 10, ln. 54 – col. 11, ln. 15, for 'video mode setup in the interlaced display mode by setting parameters in registers of the graphics controller'], if it is determined that the moving picture is to be displayed on the displaying apparatus [corresponds with Iwaki: col. 11, lns. 4-8, wherein 'the interlaced data bypass circuit 501 or the like checks if interlaced video data is input, and upon detection of interlaced video data, corresponding parameters are set in registers of the graphics controller 105 by hardware']", Iwaki further discloses [as detailed].

Iwaki's disclosure in col. 11, lns. 4-8, of 'That is, the interlaced data bypass circuit 501 or the like checks if interlaced video data is input, and upon detection of interlaced video data, corresponding parameters are set in registers of the graphics controller 105 by hardware' meets the condition of "ascertaining whether the moving picture is displayed on the displaying apparatus" and also the "conditional if" via 'checks if interlaced video data is input, and upon detection …' and furthermore Iwaki in col. 9, lns. 30-35 discloses 'when interlaced video data is displayed on the CRT, the CRT is automatically switched from the noninterlaced display mode

to the interlaced display mode to directly output the video data as interlaced data to the CRT and to interlaced-display the video data.'

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply mode selection with associated brightness and color temperature setting disclosed by Boger and Czako in combination with check for interlaced video and upon detection switch modes disclosed by Iawki, and motivated to combine the teachings because 'when such data are displayed on a display monitor of a computer, the interlaced display data output from the DVD decoder must be converted into noninterlaced display data. The interlace to noninterlace conversion is done by a display controller that controls the display monitor' as revealed in col. 1, lns 32-36.

B. Boger and Czako disclose claim 7, "A system for video control in a computer having a video controller [col. 2, lns. 49-54] for supplying a computer graphics picture signal to a displaying apparatus [col. 2, lns. 12-28], the displaying apparatus comprising selectable display settings to individually control at least one of a brightness, color, and contrast, with the video controller controlling the displaying apparatus by supplying the picture signal based upon at least one pre-assigned display adjusting value to adjust at least one display setting, corresponding to at least one display setting of the displaying apparatus, within the video controller to control the picture signal provided to the displaying apparatus, the system comprising:

a display adjusting input part allowing assignment of the pre-assigned display adjusting value adjusting a displaying status of the picture signal displayed on the displaying apparatus [Boger: col. 2, lns. 12-27 at 'television mode and interlaced mode will refer to an interlaced mode of display operation with any other modifications for optimizing the viewing of a

television signal, such as overscanning, increasing brightness, changing the color temperature, and so forth. As used herein, the terms computer graphics mode and noninterlaced mode refer to a progressively scanned computer graphics mode of operation which is typically underscanned and generally is less bright and more sharply focused than the television mode of operation.' and

col. 3, lns. 5-15 at 'The host system is operable to send a command to switch the display between the television and computer graphics modes and the host system further comprises processing circuitry to digitize the analog video material and to display it in an overlay window as a part of the host system's computer graphics mode output.' and

col. 4, ln. 59 – col. 5, ln. 8; wherein 'standard interlaced television signal' and 'noninterlaced or progressively scanned output' correspond to "display adjusting input part allowing input of a display adjusting value adjusting a displaying status of the picture signal displayed on the displaying apparatus' and

col. 6, lns. 4-16 wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures. The control information may be input by one or more of user-accessible manual controls (e.g., a push-button control panel), a remote control unit (e.g., IR, RF, cabled, and so forth) operable to control the display, and circuitry for receiving control information from the personal computer via display cable 214 (e.g., via an operating system extension, standard PC utility, display-specific utility, and so forth).' and

col. 7, lns. 21-34 at 'Upon receipt of a user input command to switch the display mode from the standard noninterlaced computer video display mode to the television mode (e.g.,

NTSC mode) or vice versa, software 302 initiates the mode change. In one embodiment, software 302 controls the video hardware by calling a command, service, or function in the VGA BIOS residing in the system ROM 304. In another embodiment, software 302 controls the video hardware directly rather than via the BIOS interface, as would be understood by those skilled in the art. The mode change command may be sent to the display microprocessor 308 via VGA controller 306, for example, via a bidirectional display data channel (DDC) interface. The microprocessor 308 acts on display circuitry 310 to change the display mode.'];

a picture adjusting value storage to store the pre-assigned display adjusting value [corresponds with col. 5, ln. 54 – col. 6, ln. 16, wherein 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.' Microprocessors and/or microcontrollers inherently employ memory in the form of RAM, ROM, PROM EEPROM, VRAM, SGRAM, (see col. 3, ln. 48 – col. 4, ln. 58 for memory types and connections) and internal registers to store and operate on all digital input/output information data. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use microprocessors and/or microcontrollers disclosed by Boger in conjunction with memory for "storing input display adjusting value".];

a displaying status change part to select a temporary change of the displaying status of the picture signal displayed on the displaying apparatus according to a user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the displaying status is based upon the user activation and non-activation of the display adjusting key

[Boger: col. 2, ln. 64 – col. 3, ln. 4, wherein user selects mode 1 or mode 2; col. 6, ln. 61 – col. 8, ln. 10, see 'user input', 'special function key, button, or key combination on a keyboard or other input device' and switching from one mode to another and/or back again thus rendering it temporary; col. 6, lns. 4-8 at 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'; and col. 7, lns. 5-52 at 'In addition to or as an alternative to an on-screen user interface, a keyboard or other input device (e.g., a pointing device) may be employed to provide user input for display mode selection, such as a special function key, button, or key combination on a keyboard or other input device. As yet a further additional or alternative input method, the user input may be obtained through a series of interactive prompts, such as a software "wizard" or the like to guide a user through the process of setting the display mode and optionally in making other settings such as channel or A/V source selection and so forth.']; and

a controller [col. 6, lns. 4-8 at 'Display 114 further comprises a microprocessor or microcontroller 218 to provide standard digital monitor controls to control, for example, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.'] controlling the video controller [col. 2, lns. 49-67; col. 5, ln. 54 – col. 6, ln. 16; see video controller] and changing the picture signal to be output from the video controller based on the pre-assigned display adjusting value [Boger: col. 5, ln. 54 – col. 6, ln. 16], in response to the selected displaying status temporary change [col. 2, ln. 55 – col. 3, ln. 4; col. 7, lns. 21-34];

wherein the picture corresponding to the selected displaying status temporary change comprises a moving picture"; and

an automatic execution selector to automatically change the displaying status of the displaying apparatus based upon a detection of the picture change automatic execution being set by the displaying status change part [Iwaki: col. 9, lns. 31-35, corresponding with 'when interlaced video data is displayed on the CRT, the CRT is automatically switched from the noninterlaced display mode to the interlaced display mode to directly output the video data as interlaced data to the CRT and to interlaced-display the video data'; and col. 10, ln. 54 – col. 11, ln. 15 wherein 'mode switching among different sources can also be automatically done' corresponds to "automatic execution"] and a determination of whether the moving picture is to be output to and displayed on the displaying apparatus [Boger: col. 7, lns. 5-20];

wherein the controller changes the moving picture signal to be output from the video controller according to the stored display adjusting value [corresponds with Iwaki: col. 2, lns. 12-21; and col. 10, ln. 54 – col. 11, ln. 15, for 'video mode setup in the interlaced display mode by setting parameters in registers of the graphics controller'], if sensed that the moving picture is displayed on the displaying apparatus [corresponds with Iwaki: col. 11, lns. 4-8, wherein 'the interlaced data bypass circuit 501 or the like checks if interlaced video data is input, and upon detection of interlaced video data, corresponding parameters are set in registers of the graphics controller 105 by hardware']" supra for claim 5 and [as detailed].

Iwaki's disclosure in col. 11, lns. 4-8, of 'That is, the interlaced data bypass circuit 501 or the like checks if interlaced video data is input, and upon detection of interlaced video data, corresponding parameters are set in registers of the graphics controller 105 by hardware' meets

the condition of "ascertaining whether the moving picture is displayed on the displaying apparatus" and also the "conditional if" via 'checks if interlaced video data is input, and upon detection …' and furthermore Iwaki in col. 9, lns. 30-35 discloses 'when interlaced video data is displayed on the CRT, the CRT is automatically switched from the noninterlaced display mode to the interlaced display mode to directly output the video data as interlaced data to the CRT and to interlaced-display the video data.'

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply mode selection with associated brightness and color temperature setting disclosed by Boger in combination check for interlaced video and upon detection switch modes disclosed by Iawki, and motivated to combine the teachings because 'when such data are displayed on a display monitor of a computer, the interlaced display data output from the DVD decoder must be converted into noninterlaced display data. The interlace to noninterlace conversion is done by a display controller that controls the display monitor' as revealed by Iawki in col. 1, lns 32-36.

Although Boger does not appear to disclose portion of the above elements, for example, pre-assigned display adjusting value, Czako does in col. 9, lns. 50-64; col. 10, ln. 65 – col. 11, ln. 10 and col. 12, lns. 10-16.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to set up in advance a TV mode and a computer graphics mode with their associated overscanning or underscanning, brightness, color temperature, and so forth settings as disclosed by Boger supra, in combination with loaded color/contrast values and user scroll disclosed by Czako, and motivated to combine the teachings because it would provide a system which permits

the modification of the color and contrast values associated with only a portion of the pixels assigned a given subpicture type as revealed by Czako in col. 4, lines 23-25.

Allowable Subject Matter

7. Claims 12 and 13 were previously allowed.

Response to Arguments

8. Substance of the first Office Action, mail date 9/27/2007, used in the final rejection is incorporated herein by reference.

Applicant's arguments filed 1/25/2008 have been fully considered but they are not persuasive.

While Applicant's argue that Boger fails to disclose or suggest changing settings within the identified computer graphics mode, Boger does teach the ability to change brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution, color temperatures.

Although Applicants argue that references Boger, Czako, and/or Iwaki, fail to claim "adjusting" of the signal. However, Boger teaches 'the terms television mode and interlaced mode will refer to an interlaced mode of display operation with any other modifications for optimizing the viewing of a **television signal**, such as overscanning, increasing brightness, changing the color temperature, and so forth' and therefore inherently adjusts the picture signal.

Furthermore switching from interlaced to non-interlaced modes completely changes the picture signal as revealed by Boger.

Applicant's are referred to the specific references as rejected in claim 2 for the argument of not disclosing at least the claimed:

"selecting a temporary change of a current display setting within the video controller for the picture signal upon a user selection regarding operation of the computer through user activation of a display adjusting key separate from the at least one display, wherein the temporary change of the current display setting is based upon the user activation and non-activation of the display adjusting key;

adjusting the picture signal based on the pre-assigned display adjusting value and the selecting of the temporary change," as set forth in claim 2.

Applicant's are referred to the specific references as rejected in claims 3, 5 and 8 for the argument of not disclosing at least the claimed:

"reviewing a selection of a picture change automatic execution to allow a displaying status of the picture signal to be automatically changed by the video controller based on whether the moving picture is determined to be output to and displayed on the displaying apparatus;

automatically adjusting the moving picture signal supplied from the video controller to the displaying apparatus according to the pre-assigned display adjusting value if it is determined that the picture change automatic execution has been selected and the moving picture is to be displayed on the displaying apparatus," as set forth in claim 3.

Applicants are directed to 112 rejections with respect to these claims 3 and 4.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Responses

10. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Inquiries

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on (571) 272-7778. The Central FAX Number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Greg F Cunningham/

Examiner, Art Unit 2624

4/21/2008

/Matthew C Bella/

Supervisory Patent Examiner, Art Unit 2624